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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,529	03/02/2004	Takashi Oda	040302-0385	2757

22428 7590 09/21/2007  
FOLEY AND LARDNER LLP  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

MAIL DATE	DELIVERY MODE
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09/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/790,529

**Applicant(s)**

ODA ET AL.

**Examiner**

Marc A. Patterson

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

**WITHDRAWN REJECTIONS**

1. The objection to the specification, of record, on page 2 of the previous Action, is withdrawn.
2. The 35 U.S.C. 112, first paragraph rejection of Claim 49, of record on page 2 of the previous Action, is withdrawn.
3. The 35 U.S.C. 112, second paragraph rejection of Claim 49, of record on page 2 of the previous Action, is withdrawn.
4. The 35 U.S.C. 102(b) rejection of Claims 1 – 9, 11 – 12 and 49 as being anticipated by Zaima et al (European Patent 0885937), of record on page 2 of the previous Action, is withdrawn.
5. The 35 U.S.C. 103(a) rejection of Claim 10 as being unpatentable over Zaima et al (European Patent 0885937), of record on page 2 of the previous Action, is withdrawn.

**NEW REJECTIONS**

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 – 3, 5 and 7 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Birchall et al (U.K. Patent No. 2010287)..

With regard to Claims 1 – 2, Birchall et al disclose a resin composition (polymer composition; page 1, line 9) comprising a compound comprising silica (page 3, line 5), therefore oxidized silicon, and a polar group on the surface thereof (free silanol, therefore hydroxyl; page 3, line 11); and has a hydrophobic group on the surface thereof comprising a group –OR bonded to the oxidized compound, in which R represents a non – polarized group (alkyl; page 1, lines 41 – 45) which is directly bonded to the surface, because a chemical reaction between the silica and the organo – silicon compound comprising the –OR group evolves ethanol, therefore there is contact between the OR and the silica surface (page 4, lines 19 – 25); the compound is an additive to a thermoplastic resin composition; (page 3, lines 61 – 64) .

With regard to Claims 3 and 5, the polar group disclosed includes a group other than hydroxyl comprising the amino group of a stabilizer (page 2, line 33).

With regard to Claim 7, as stated above, the hydrophobic group comprises alkyl.

With regard to Claims 8 – 9, a length of the oxidized compound is 1 nm and 380 nm or less (page 2, lines 57 – 62).

With regard to Claim 10, the compound is present in the amount of 1 to 60% by weight (page 3, lines 59 – 60).

With regard to Claim 11, the thermoplastic resin includes acrylic resin (page 3, line 63).

*Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4, 6 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birchall et al (U.K. Patent No. 2010287).

Birchall et al disclose a resin composition comprising a hydrophobic group and polar group and hydrophobic group other than hydroxyl as discussed above. With regard to Claims 4, 6 and 49, Birchall et al fail to disclose a polar group other than hydroxyl that is 50% or more or 80 to 90% based on the whole polar group, and hydrophobic group that is 30 to 70% of the hydrophobic group and polar group. However, Birchall discloses teaches that the relative amounts of silica, organo – silicon compound and stabilizer are determined by routine optimization depending on the desired use of the end product (best determined by simple trial; page 3, lines 28 – 29). It therefore would have been obvious for one of ordinary skill in the art to determine the relative amounts of silica, organo – silicon compound and stabilizer, therefore the amounts of polar groups and hydrophobic group, depending on the desired end use of the product.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Birchall et al (U.K. Patent No. 2010287) in view of Zaima et al (European Patent 0885937).

Birchall et al disclose a filler comprising silica for a resin as discussed above. Birchall et al fail to disclose a resin comprising polycarbonate.

Zaima et al teach silica as a filler (page 4 lines 1 – 15) for polycarbonate (page 3, line 51) for the purpose of obtaining a resin that is useable as a coating (page 12, lines 52). One of ordinary skill in the art would therefore have recognized the advantage of providing for the polycarbonate of Zaima et al in Birchall et al, which comprises a resin, depending on the desired use of a coating of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a polycarbonate in Birchall et al in order to obtain good adhesion a resin useable as a coating as taught by Zaima et al.

#### ANSWERS TO APPLICANT'S ARGUMENTS

11. Applicant's arguments regarding the 35 U.S.C. 102(b) rejection of 1 – 9, 11 – 13 and 49 as being anticipated by Zaima et al (European Patent 0885937) and 35 U.S.C. 103(a) rejection of Claim 10 as being unpatentable over Zaima et al (European Patent 0885937), of record in the previous Action, have been considered and have been found to be persuasive. The rejections are withdrawn. The new rejections above are directed to amended Claims 1 – 12 and 49.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497. The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Marc Patterson* 9/17/07

Marc A. Patterson, PhD.

Primary Examiner

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